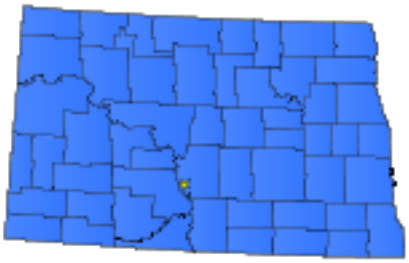
University of North Dakota Backflow Valve Project

Full Mitigation Best Practice Story

State-wide, North Dakota



The State of North Dakota - During the spring flood of 1997, much of the damage was caused by sewer back-up after the city's lift station failed. This resulted in tremendous damage to personal property in lower levels of buildings throughout the city, including the University of North Dakota.

The University of North Dakota installed several backflow valves in buildings that suffered substantial damage during the 1997 flood.

At a cost of $19,589 the university installed backflow valves in five buildings that had in excess of $1,278,136 of damage. This minimal cost will cover future damages caused by sewer back-up in an area where such flooding is common.

Billions in damage, homes destroyed, residences forced from homes. The flood of 1997 is a tragedy that scars all residents of the Midwest, a region that exemplifies the battle scars of nature in its darkest times.

Blowing snow tears across the plains eight times. A sheet of ice comes raining down from the sky. Water roars through the countryside, and fires ravage a city. When viewed as a series of events, the spring of 1997 is one that will never be forgotten. Four events, an ice storm, blizzards, a flood, and a fire, have all ravaged this region. Nature has seemingly selected this typical midwest states to struggle through numerous powers of the environment.

Activity/Project Location

Geographical Area:	**State-wide**
FEMA Region:	**Region VIII**
State:	**North Dakota**

Key Activity/Project Information

Sector:	**Private**
Hazard Type:	**Flooding**
Activity/Project Type:	**Utility Protective Measures**
Activity/Project Start Date:	**04/1997**
Activity/Project End Date:	**08/1997**
Funding Source:	**Academic**
Funding Recipient:	**Critical Facility - School**
Funding Recipient Name:	**University of North Dakota**

Activity/Project Economic Analysis

Cost:	**$19,589.00 (Actual)**

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster?	**Unknown**
Value Tested By Disaster?	**No**
Repetitive Loss Property?	**Unknown**

Reference URLs

Reference URL 1:	**http://www.floodsmart.gov/**
Reference URL 2:	**http://www.state.nd.us/dem/**

Main Points

- Sewer backups resulted in tremendous damage to personal property in lower levels of buildings throughout the city, including the University of North Dakota.
- Installed several backflow valves to prevent sewer back-up.
- At a cost of $19,589 the university installed backflow valves in five buildings that had in excess of $1,278,136 of damage.